Appl. No. 09/682,024
Amdt. dated September 24, 2003
Reply to Office action of April 24, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended)   A device providing for a display screen and performing predetermined processing by operating a pointer displayed on the display screen, the device comprising:

a display controller for controlling a display position of the pointer on the display screen;

a displacement detector for detecting a displacement of the device itself; and

a pointer moving device for moving the pointer on the display screen based on the detected displacement of the device itself, wherein the displacement detector comprising an image sensor, wherein an image sensed by the image sensor is processed to obtain a displacement of the device itself.

2. (canceled)

3.   The device according to claim 2 claim 1, wherein the image sensor comprising a complementary metal-oxide semiconductor or a charge coupled device.

4.   The device according to claim 2 claim 1, wherein the image sensor comprising an infrared sensor.

5.   The device according to claim 2 claim 1, further comprising an operator for activating the image sensor.

Appl. No. 09/682,024
Amdt. dated September 24, 2003
Reply to Office action of April 24, 2003

6.   The device according to claim 5, wherein the operator further includes the function for directing a selection of an object pointed to by the pointer or for the execution of predetermined processing defined for the object, whereby the operator has a plurality of functions.

7.   The device according to claim 1, wherein the device is of a wristwatch type.

8. (currently amended)   A wristwatch type device, comprising:
        a display for displaying a screen;
        a case for supporting the display;
        an attached belt attached to the case; and
        a touch sensor mounted in the case or the attached belt for performing a predetermined operation on an object displayed on the screen, wherein the touch sensor is provided on both sides of the display.

9. (canceled)

10.   The wristwatch type device according to claim 8, further comprising:
        displacement detection section for detecting a displacement of the display; and
        pointer position changing device for changing a display position of a pointer based on the detected results, thereby moving the pointer displayed on the screen.

11. (currently amended)   A method for moving a position of a pointer displayed in a display of a device, comprising:
        a first step of using an image sensor to take taking an image of a physical object facing the device continuously and detecting a relative displacement between the taken object and the display; and

Page 4 of 9

Appl. No. 09/682,024
Amdt. dated September 24, 2003
Reply to Office action of April 24, 2003

a second step for changing a display position of the pointer displayed on the display based on the detected displacement.

12.   The method according to claim 11, wherein the first step further comprising the steps of:

calculating a motion vector at a certain place in an image based on the movement of the image that was taken multiple times; and

obtaining a relative displacement between the object and the display based on the calculated motion vector.

13.   The method according to claim 12, when moving the device relative to the object, the relative displacement between the object and the display is obtained by inverting a sign of the motion vector.

14.   The method according to claim 11, wherein the first step comprising the steps of:

generating a time-series moving pattern of a certain place based on a position of the certain place in a principal image and a position of a place corresponding to the certain place in a plurality of other images that were taken apart in time from the principal image; and

comparing the generated time-series moving pattern with a plurality of model patterns registered in advance to select a most approximate model pattern;

wherein the second step comprising the steps of changing a display position of the pointer based on a moving pattern that was defined for the selected model pattern.

15. (canceled)

16. (canceled)